A. Project Information Form

1. Applying For:	Prop 13 Urban Water Conservation Capital Outlay Grant
2. Principal Applicant:	City of Rohnert Park (CA)
3. Project Title:	Water Meter Retrofit Project
4. Person Authorized to sign/submit PSP	City Manager
5. Contact Person:	Joseph Gaffney, City Engineer 6750 Commerce Blvd. City of Rohnert Park, CA 94928-2486 (707) 588-2232; (707) 588-2238 (FAX) email: jgaffney@rpcity.org
6. Funds Requested:	$ 2,553,096
7. Applicant Funds pledged:	$ 283,678
8. Total Project Costs:	$ 2,836,774
9. Estimated Project Benefits: % Benefits (applicant/CALFED other)	$ 8,360,000 (water + wastewater) 80 % Applicant 20 % CALFED other (SCWA)
10. Estimated Annual Water Savings: Estimated Total Water Savings: Other Benefits (quality, etc.)	1,083 (acre-feet) – 15% savings vs. pre-metered demand 16,245 (acre-feet) – over 15 years 5,361 (acre-feet) – total wastewater savings
11. Duration of Project:	07/01/02 to 6/30/03
12. State Assembly District:	06 – Joseph Nation
13. State Senate District:	3 – John Burton
14. Congressional District:	6th – Lynn C. Woolsey
15. County where project located:	Sonoma County, CA
16. UWMP Adopted/Submitted to DWR:	04/10/01
17. Type of Applicant:	CITY
18. Project Focus:	Urban
19. Project Type:	Implementation of Urban Best Management Practices
20. Any Phyiscal Changes:	CEQA Article 19, Categorical Exemption, Section 15301

B. Signature Page

By signing below, the official declares the following:

The truthfulness of all representations in the proposal;

The individual signing the form is authorized to submit the proposal on behalf of the applicant; and

The individual signing the form read and understood the conflict of interest and confidentiality section and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant.

_____	_____	_____
Signature	Name, title	Date

PROPOSAL PART TWO

Project Summary

The City of Rohnert Park is committed to retrofitting its water service area with water meters immediately. The city is located in Sonoma County just south of Santa Rosa, California and serves about 42,000 residents. The city is responding to regional initiatives that require immediate metering of its water system to comply with two regional resource agreements as follows:

1. Regional water supply MOU (Appendix B, city meter retrofit plan) with Sonoma County Water Agency, including several other water providers in the region, which requires the city to meter its water system or be penalized severely for using the regional surface water source in the future; and
2. Agreement between the city and City of Santa Rosa, its wastewater service provider, requires that the city meter its service area as a condition of temporary transfer of wastewater treatment capacity.

These external forces have motivated the city to prepare a water meter retrofit plan which was adopted by its City Council in August 2001. The plan lays out the framework and issues necessary to enable the city to aggressively complete a meter retrofit project for its unmetered services. Securing outside funding (i.e. Prop 13) to help fund the project will greatly expedite project implementation by allowing the city to proceed immediately with its meter retrofit project in a very cost-effective manner. After metering, the city plan is committed to the transition from flat rate billing to consumption based billing practices for residential customers. The city expects to reduce per capita water demands by 15 percent comparing pre-metered water demands to future demands with metered rates in place. In addition, there will be a reduction in wastewater flows equivalent to one-third of the annual water savings once metered rates are adopted by the Council. The city is very committed to the project. This project is proposed in the regional Sonoma County Water Agency's adopted 2000 Water Conservation Plan, which incorporated the city's 2000 Urban Water Management Plan, and the City Council adopted a water meter retrofit plan in 2001 to complete all project elements. The city is prepared to proceed immediately upon approval of Prop 13 Water Conservation Capital Outlay grant funds.

A. Scope of Work: Relevance and Importance

1. The scope of work calls for the installation of 7,373 radio read water meters on all currently unmetered services. There will be a bid and award process for the installation of water meters by a qualified contractor(s). The city will purchase the required meters in bulk upon approval of the project funding agreement. The city will use an RFP approach for meter procurement. The contractor selected to complete the meter installations for the project will be required to complete all meter installations in less than one year. This will require the contractor to complete an average minimum of 40 meter installations/day. This standard is very achievable because 7,023 of the meter retrofit installations will be for meter sets with angle stops and boxes already in place, with a majority (5,600) of these being dual set meter box situations. This will allow very expedient and cost-effective meter installations rates by the contractor(s).

   The city will begin reading meters upon installation to begin the data collection process and to identify leaky installations. The city will then monitor customer water usage for one year, and use this demand information to establish metered rates. The new metered rate schedules are planned to be adopted and in effect about 18 months after all meter retrofit installations are completed. This allows 12 months to collect demand data for all customers, and 6 months to develop and adopt new metered rates for all customers. The city must meter its system to comply with regional agreements.

Nature, scope, and objectives of the project.

The nature/scope of the project are as follows:
(1) Retrofit 7,373 city residential services with water meters to complete metering system-wide;
(2) Install radio read water meters in accordance with city meter installation specifications;
(3) Complete all retrofit installations in less than one year via contractor(s);
(4) Begin reading water meters upon completing meter retrofit installations;
(5) Read all water meters for one year and use data to develop metered rates;
(6) Adopt metered rates and bill all customer user classes based on their water consumption;
(7) Achieve water and wastewater savings on a system-wide basis.

Objectives of the city's metering program are as follows:
(1) Satisfy the requirements set forth in both the regional water supply MOU and wastewater service agreements;
(2) Achieve stated 15 percent water savings to reduce local groundwater pumping, improve system quality, and transition into conjunctive use operation between ground and surface water supplies;
(3) Achieve stated wastewater savings through indoor water conservation project benefits;
(4) Meter all service connections and charge customers for water service based on consumption to reduce unaccounted for water losses and bill customers equitably for water service;
(5) Accomplish adopted 2000 regional/local water conservation plan objectives; and
(6) Implement CUWCC urban best management practices to accomplish regional and state-wide demand management objectives.

2. Statement of critical local, regional, Bay-Delta, State or federal issues. Include an explanation of the need for the project. Describe how this project would be consistent with local or regional water management plans or other resource management plans.

The proposed project is consistent with local, regional, and state-wide issues and policies as summarized below. The city is prepared to immediately implement the project upon funding approval:

Critical Need	Plan/Policy Consistency	Action/Status
Local	2000 Urban Water Management Plan (included in SCWA regional water conservation plan)	Adopted by City Council in 2001; being implemented.
Local	2001 Water Meter Retrofit Plan	Adopted by City Council in 2001; being implemented.
Regional	2000 Sonoma County Water Agency Regional Water Conservation Plan	Proposes/plans for city meter retrofit project to be completed.
Regional	Required in regional water transmission MOU Required in regional wastewater agreement	Required now for consistency with regional agreements.
State-wide	CUWCC Best Management Practices (BMP)	Implement state-wide BMPs.
State-wide	State-wide water conservation goals	Consistent with state-wide goal.

It is critical that the city accomplish its meter retrofit project objectives for both local and regional motivations. The regional agencies are very supportive of the city's effort and are all metered agencies. Stretching local and regional water supplies and wastewater system capacities is vital to the region.

B. Scope of Work: Technical/Scientific Merit, Feasibility, Monitoring and Assessment

Metering of water service connections is a proven method of accomplishing long term efficient use of water resources. The city's proposal is based on the well known fact that metered communities use less water than unmetered communities. Metering a service area allows all customers to be billed based on their water consumption, encouraging more conservation through a pricing signal mechanism. Metering allows all other water conservation measures the opportunity to be successful. The table below summarizes the benefits of metering in other meter retrofit experiences.

Location	Cited Metered Water Savings	Source
Canada	26-70 percent	U.S. Water News, Dec. 2001
U.S.	15-49 percent	City of Davis meter retrofit study, 1990
CUWCC MOU	20 percent	CUWCC MOU - BMPs

The city is projecting a 15 percent average annual water savings from metering its service area and converting all customers to metered rates. This target is considered to be very consistent with past experiences, and very achievable upon completion of the project. The City of Davis, who metered its service area in the 1990s, has recently observed a reduction of 15 percent in its water use compared to pre-metered conditions. This was accomplished to date with a single tier structure for single family residential customers, and two-tier rates for all other user classes. Additional savings would likely result if tiered rates were in place for all users.

1. Methods, procedures and facilities

The methods and procedures associated with the installation of water meters on existing water services are largely based on the extent of the retrofit installation required. There are two primary types of meter retrofit installations. The first is a total meter retrofit installation. This involves the excavation of the service, installation of angle stop valves on both customer and utility side of the service, installation of a meter box, and installation of a water meter between the angle stop valves. The second is a meter-only retrofit installation. The angle valves, meter box, and spacer between the angle valves are installed, and only the meter itself must be installed to complete the retrofit process. In the case of city's meter retrofit project, about 95 percent of its retrofit installations are the meter-only variety requiring only the meter to be installed. The remaining 5 percent of the city's retrofit installations require a total retrofit process.

The bid/award, contractor installation method is proposed for all of the city's meter retrofit installations (7,373). This will allow the city to bulk purchase meters from the vendor, and allow the contractor to retrofit meters at a high rate in a relatively short period of time (less than one year). This method is a recipe for a very cost-effective meter retrofit installation project.

Meter retrofit procedures will require all meter installations to comply with the city's meter installation specifications (attached). Each meter retrofit installation will be inspected to ensure compliance with the city's meter specifications and proper installation and function of each retrofit installation. The initial read of each meter will be collected by the inspector to make sure the meter reading capability is intact and that no visual water leaks are present after the installation on either the city or customer side of the meter installation. Re-installation will be required if meter specs are not met satisfactorily.

2. Task List and Schedule

Task List - Major Milestones	Schedule/Expenditures	Notes
Submit Prop 13 grant application submittal	March 1, 2002	DWR Application Deadline
Execute funding application	September 1, 2002	DWR Projected Schedule
Bid/Award meter retrofit contract(s)	October-December 2002 ($13,500+$1,867,635)	City Process, 3-Months
Meter retrofit installations	January-November 2003 ($10,000+$701,725+$46,000)	Contract Spec,11-months
One year data collection for metered rate development	Jan2004 read cycle through Jan2005 read cycle	12-months data collection period Nov/Dec2003-Nov/Dec2004 use
Develop/Adopt metered rates	Nov2004-April2005	6-months
Metered rates effective	May 2005	For water use in May-June 2005 period (July2005 read cycle)

The budget expenditures are broken out by major milestone above. The planning and design and meter procurement costs occur early in the project. The contract installation and meter inspection related costs are incurred later in the project schedule fairly evenly throughout the retrofit installation period. The project contingency is not shown as an expenditure, however is included in the total cost estimate.

3. Monitoring and assessment

Three primary monitoring and assessment data sets will be used to assess project performance. The bi-monthly meter reading data collected for all metered accounts will provide a record of system-wide water demands by all user classes, including single and multifamily residential, commercial and industrial, and irrigation customers. Monthly water production data will be tracked in accordance with the bi-monthly reading data to assess relative changes in water demands, and track unaccounted for water system losses. Pre and post-retrofit dry weather wastewater flows will be monitored to assess project wastewater savings. The combination of system-wide meter reading data, monthly water production data, and monthly wastewater flow data will provide the information necessary to monitor and assess the project impacts and benefits.

The city's bi-monthly meter reading schedule is proposed as follows:

Water Use Period	Read Date (first week)	Read Method/Duration
January-February	March	Radio Read – 2 to 3 days
March-April	May	Radio Read – 2 to 3 days
May-June	July	Radio Read – 2 to 3 days
July-August	September	Radio Read – 2 to 3 days
September-October	November	Radio Read – 2 to 3 days
November-December	January	Radio Read – 2 to 3 days

The city may use a contract meter reading firm to collect bi-monthly system reads for all customers. Collecting customer demand data according to the above schedule will allow the city to collect and monitor demand data on a calendar (Jan-Dec) or fiscal year (July-June) basis. As meters are installed, meter reading will commence on the normal bi-monthly read schedule.

Annual water production data will provide the bigger picture view of project effectiveness. The table below estimates future production with and without meters installed, including the 15 percent water savings accomplished through the project. Based on the city's general plan, a one percent annual growth rate is expected to 2020 for the city buildout scenario. The water production data with and without meters reflects this growth rate from 2002 to 2020. The 15-year project life used to calculate water and wastewater savings benefits assumes meters are installed and metered rates are in place. Therefore full project benefits are assumed from 2006-2020. Minor savings are projected leading up to the adoption of metered rates as the city water customers become aware of the imminent conversion to metered rates. Generally, meters are projected to be installed in 2003, metered rate demand data collected in 2004 and metered rates adopted and in place during 2005.

Water Production	Water Production (without meters)	Water Production (with meters)	Water Savings (15% savings)	Wastewater savings (1/3 savings indoor)
2000	7,221 ac-ft	7,221 ac-ft	0 ac-ft	0 ac-ft
2001	7,221	7,221	0	0
2002	7,293	7,293	0	0
2003	7,366	7,366	0	0
2004	7,440	7,007	433 (not included)	142 (not included)
2005	7,514	6,614	900 (not included)	296 (not included)
2006	7,589	6,506	1,083	357.4
2007	7,665	6,582	1,083	357.4
2008	7,741	6,658	1,083	357.4
2009	7,819	6,736	1,083	357.4
2010	7,897	6,814	1,083	357.4
2011	7,976	6,893	1,083	357.4
2012	8,056	6,973	1,083	357.4
2013	8,136	7,053	1,083	357.4
2014	8,218	7,135	1,083	357.4
2015	8,300	7,217	1,083	357.4
2016	8,383	7,300	1,083	357.4
2017	8,467	7,384	1,083	357.4
2018	8,552	7,469	1,083	357.4
2019	8,637	7,554	1,083	357.4
2020	8,724	7,641	1,083	357.4
TOTAL			16,245 ac-ft	5,361 ac-ft

4. Preliminary Plans and Specs

The city has adopted meter installation specifications in place. All meter retrofit installations shall be required to meet the city's meter installation specifications. The city's current meter specs are included in this application. A draft bid/award package is available on request.

C. Quantifications of the Applicants and Cooperators.

1. City of Rohnert Park, City Manager and City Engineer
2. Regional water supply MOU member agencies

D. Benefits and Costs.

1. Budget breakdown and justification. The estimated average cost/meter retrofit = $374.75. This includes all projected costs for procuring water meters and completing all retrofit installations. The low cost per meter of the city's project is largely due to the fact that 95 percent of the 7,373 retrofit installations only require the meter to be installed. The remaining installations are total retrofits. The estimated life-cycle costs of meter reading are included in the benefit/cost calculation below.

Cost Item	Cost ($)	Assumptions
Land Purchase/Easement	$ 0	Meters installed in utility easement.
Planning/Design/Engineering	$ 13,500	RFP/changes to plans and specs.
Parts and Materials	$ 1,867,635	Radio-read meters + pipes/valves/boxes.
Installation Costs	$ 701,725	Labor costs + incidentals for parts and equipment
Equipment Purchases/Rentals	$ 10,000	Excavation equipment
Environmental Mitigation	$ 0	Exempt from CEQA
Inspection/Admin/Overhead	$ 45,000	Infield inspection/initial reads/record-keeping
Project Legal/License Fees	$ 1,000	Radio License Fee for radio read system
Sub-total	$ 2,638,860	Without contingency
Contingency (7.5%)	$ 197,914	Small contingency due to dual & single set retrofits
Project TOTAL	**$ 2,836,774**	**Highest expected total project costs**

Number of meter retrofits: 5,600 dual-set + 1,423 single-set + 350 retrofits = 7,373 meters to retrofit.
_ inch radio read meter@$245/meter = $1,806,385 + materials $61,250 (350*$175) = $1,867,635.
Single and dual set meter installations (7,023)@$75/meter; retrofit installations (350)@$500/meter.

3. Cost-Sharing

The city is committed to provide up to $283,678 of local match funding for this project. The commitment for these cost-sharing funds are included in the attached resolution adopted by the City Council on February 26, 2002.

4. Benefit Summary and Breakdown

The primary project benefits are associated with water and wastewater savings to the city. However because the city is a part of a regional resource MOU through the Sonoma County Water Agency, a portion of the benefits are allocated to the regional benefit. Eighty percent of the total project benefits are allocated to the local benefit (the city) due to the very direct nature of the benefits to the water and wastewater systems. A summary and breakdown is below.

Benefit Type	Quantity	Value	Total Value	Local (80%)
Water Savings	**16,245 ac-ft**	**$383/ac-ft**	**$6,221,835**	**$4,977,468**
Wastewater Savings	**5,361 ac-ft**	**$400/ac-ft**	**$2,144,400**	**$1,715,520**
TOTAL	**21,606 ac-ft**		**$8,366,235**	**$6,692,988**

What is not included in the calculation of the benefits of metering are penalties contained in the city's regional water supply MOU which would penalize the city up to $400,000 per year for not completing the proposed meter retrofit project by 2005. Therefore the benefit quantification is conservative by nature.

Assessment of Costs and Benefits - Assumptions

1. Water savings of 15% community-wide, the low range of savings achieved by other communities.
2. Wastewater equivalent to a third of water savings through indoor conservation and savings.
3. Value of saved acre-foot of water =$383, value of saved acre-foot wastewater =$400.
4. 15-year project benefit horizon, water meter life typically 15-25 years.
5. Project costs assume 7,373 total retrofit radio read installations. 5,600 dual-box, 1,423 single-box and 350 total retrofit installations. Dual and single box installations are meter-install only. Total retrofit requires excavation, meter box, angle valves and meter installation steps. All meters can be installed within one year. Meter reading costs on 7,373 meters = $398,142 (over 15 years).
6. 80% benefits local, 20% regional (SCWA).

Benefit/Cost Ratio (>1.0)
Total Project Benefits (Local Share) = **$ 6,692,988**
Total Project Costs = **$ 3,234,916 ($2,836,774+$398,142)**
Benefit/Cost Ratio (2001 dollars) **= 2.07**

Net Present Value Calculation

1. Assumes initial project costs of $2,836,774 incurred at end of first year;
2. Discount rate of 6%;
3. Water/wastewater benefits combined (savings x value per acre-foot) annually over 15 years;
4. NPV (6%, $283774, $557749 (year 1)…..$557749 (year 15)) = $2,434,172.79

E. Outreach, Community Involvement and Acceptance

The City Council adopted a meter retrofit plan in August 2001. The plan underwent public review including special workshops, media coverage, and public hearing opportunities that were noticed and publicized. In addition the city has executed its regional water supply MOU with Sonoma County Water Agency which includes requirements to meter its service area by 2005. The city also adopted its 2000 Urban Water Management Plan (prepared and incorporated as part of the SCWA 2000 regional water conservation plan) via public hearing and included outreach/involvement opportunities.

As part of the project, the city will employ a variety of outreach and involvement efforts. The city will notify retrofit customers directly (through a newsletter) during the project bid and award process to communicate pertinent project milestones and schedule information. The city will notify each customer directly again closer to the time of their actual retrofit installation indicating the estimated date of the meter retrofit installation. This will be accomplished via direct letter communication or by leaving a door hanger at the residence to be retrofitted within 2-3 days of the retrofit installation. The city will keep a project update link on their internet website so customers can check the project status any time.

Once meters are installed, the city will provide its retrofit customers with their own water use information as it is collected for informational purposes. Thereafter, the city plans to provide a one-year water use history on individual water account utility bills for leak and conservation purposes.

The City Council and community strongly support the project. Implementing the project cost-effectively is of vital importance to the community. Securing Proposition 13 water conservation capital outlay grant funds will enable the city to implement their meter retrofit project in a very cost-effective manner, install the meters rapidly through a contract installation approach, and help to maintain strong community support throughout the project.

PROPOSAL PART THREE

Matching Funds Commitment Letter
The attached resolution adopted by the City Council authorizes the city to provide matching funds not to exceed $283,678 for this project.

Resolution
The attached resolution adopted by the City Council authorizes the city manager to submit the Prop 13 grant funding application, execute the funding agreement upon approval, and expend local matching funds for the project.

Environmental Documentation
The project is categorically exempt from CEQA (see citation below). A categorical exemption will be filed by the city's Planning Department upon approval of project funding.

Article 19 Categorical Exemptions, Section 15301 Existing Facilities:
"Class I consists of the operation, repair, maintenance or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that previously existing…The key consideration is whether the project involves negligible or no expansion of an existing use, including but not limited to:….(b) Existing facilities of both investor and publicly-owned utilities used to provide electric, power, natural gas, sewage, or other public utility services."

City of Rohnert Park
Water Meter Retrofit Project
Prop 13 Water Conservation Outlay Grant Funding Proposal

APPENDIX INFORMATION

Resolution adopting 2000 Urban Water Management Plan (4/10/01)
Resolution approving Water Meter Retrofit Plan (8/28/01)
Excerpts From Water Meter Retrofit Plan
Resolution approving execution of CUWCC MOU (10/23/01)
Resolution Authorizing Execution/Local Match Prop 13 Funding (2/26/02)

City of Rohnert Park Meter Retrofit Grant Application - NPV Calculation
(initial project costs in first year, benefits for water/ww spread over 15 years)
NPV = $2,434,172.79

Consolidated Water Use Efficiency
2002 Proposal Solicitation Package

Application For Proposition 13
Urban Water Conservation Program Funding

Project Name
City of Rohnert Park (CA)
Water Meter Retrofit Project

Application Contents

Application Prepared and Submitted by the
City of Rohnert Park.